# NEC Corporation

**Express5800/GT110g-S (Intel Core i3-4350)**

<table>
<thead>
<tr>
<th>SPECint®2006</th>
<th>55.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_base2006</td>
<td>53.2</td>
</tr>
</tbody>
</table>

## Hardware

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Core i3-4350</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td></td>
</tr>
<tr>
<td>CPU MHZ</td>
<td>3600</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>2 cores, 1 chip, 2 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1 chip</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache</td>
<td>4 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>1 x 250 GB SATA, 7200 RPM</td>
</tr>
<tr>
<td>Other Hardware</td>
<td>None</td>
</tr>
</tbody>
</table>

## Software

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Red Hat Enterprise Linux Server release 6.5 (Santiago)</td>
</tr>
<tr>
<td>Compiler</td>
<td>C++: Version 14.0.2.144 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>File System</td>
<td>ext4</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software</td>
<td>Microquill SmartHeap V8.1</td>
</tr>
</tbody>
</table>

## Test Details

- **CPU2006 license:** 9006
  - **Test date:** May-2014
- **Test sponsor:** NEC Corporation
  - **Hardware Availability:** Jul-2014
- **Tested by:** NEC Corporation
  - **Software Availability:** Jan-2014

## Test Results

![Benchmark Results](image-url)
NEC Corporation

Express5800/GT110g-S (Intel Core i3-4350)

SPECint2006 = 55.3
SPECint_base2006 = 53.2

CPU2006 license: 9006
Test sponsor: NEC Corporation
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Test date: May-2014
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Software Availability: Jan-2014

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds Base</th>
<th>Ratio</th>
<th>Seconds Peak</th>
<th>Seconds Base</th>
<th>Ratio</th>
<th>Seconds Peak</th>
<th>Seconds Base</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>250</td>
<td>39.1</td>
<td>249</td>
<td>39.2</td>
<td>210</td>
<td>46.6</td>
<td>210</td>
<td>46.5</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>359</td>
<td>26.9</td>
<td>360</td>
<td>26.8</td>
<td>359</td>
<td>26.9</td>
<td>360</td>
<td>26.8</td>
</tr>
<tr>
<td>403.gcc</td>
<td>232</td>
<td>34.6</td>
<td>233</td>
<td>34.5</td>
<td>230</td>
<td>34.9</td>
<td>230</td>
<td>35.0</td>
</tr>
<tr>
<td>429.mcf</td>
<td>132</td>
<td>69.2</td>
<td>132</td>
<td>69.3</td>
<td>132</td>
<td>69.2</td>
<td>132</td>
<td>69.3</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>359</td>
<td>29.3</td>
<td>358</td>
<td>29.3</td>
<td>356</td>
<td>29.5</td>
<td>356</td>
<td>29.5</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>131</td>
<td>71.0</td>
<td>132</td>
<td>70.7</td>
<td>131</td>
<td>71.0</td>
<td>131</td>
<td>71.0</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>349</td>
<td>34.7</td>
<td>349</td>
<td>34.7</td>
<td>347</td>
<td>34.8</td>
<td>347</td>
<td>34.8</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>21.6</td>
<td>958</td>
<td>21.8</td>
<td>949</td>
<td>21.6</td>
<td>958</td>
<td>21.8</td>
<td>949</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>377</td>
<td>58.7</td>
<td>379</td>
<td>58.5</td>
<td>377</td>
<td>58.7</td>
<td>379</td>
<td>58.5</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>245</td>
<td>25.5</td>
<td>245</td>
<td>25.5</td>
<td>245</td>
<td>25.5</td>
<td>245</td>
<td>25.5</td>
</tr>
<tr>
<td>473.astar</td>
<td>224</td>
<td>31.3</td>
<td>223</td>
<td>31.5</td>
<td>224</td>
<td>31.3</td>
<td>224</td>
<td>31.3</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>108</td>
<td>64.1</td>
<td>107</td>
<td>64.4</td>
<td>107</td>
<td>64.4</td>
<td>104</td>
<td>66.5</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS Settings:
  Energy Performance: Performance

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"
OMP_NUM_THREADS = "2"

Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Base Compiler Invocation

C benchmarks:
  icc -m64

C++ benchmarks:
  icpc -m64
# SPEC CINT2006 Result

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| SPECint2006 = | 55.3 |
| SPECint_base2006 = | 53.2 |

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## Base Portability Flags

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<th>Flags</th>
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<tr>
<td>400.perlbench</td>
<td>-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
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<tr>
<td>473.astar</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX</td>
</tr>
</tbody>
</table>

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## Base Optimization Flags

- **C benchmarks:**
  -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
- **C++ benchmarks:**
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
  -Wl,-z,muldefs -L/sh -lsmartheap64

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## Base Other Flags

- **C benchmarks:**
  403.gcc: -Dalloca=_alloca

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## Peak Compiler Invocation

- **C benchmarks (except as noted below):**
  icc -m64
  400.perlbench: icc -m32
  445.gobmk: icc -m32
- **C++ benchmarks (except as noted below):**
  icpc -m32
  473.astar: icpc -m64
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**Software Availability:** Jan-2014

#### Peak Portability Flags

- 400.perlbench: `-DSPEC_CPU_LINUX_IA32`
- 401.bzip2: `-DSPEC_CPU_LP64`
- 403.gcc: `-DSPEC_CPU_LP64`
- 429.mcf: `-DSPEC_CPU_LP64`
- 456.hmmer: `-DSPEC_CPU_LP64`
- 458.sjeng: `-DSPEC_CPU_LP64`
- 462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
- 464.h264ref: `-DSPEC_CPU_LP64`
- 473.astar: `-DSPEC_CPU_LP64`
- 483.xalancbmk: `-DSPEC_CPU_LINUX`

#### Peak Optimization Flags

**C benchmarks:**

- 400.perlbench: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch -ansi-alias`
- 401.bzip2: basepeak = yes
- 403.gcc: `-xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32`
- 429.mcf: basepeak = yes
- 445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias`
- 456.hmmer: basepeak = yes
- 458.sjeng: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4`
- 462.libquantum: basepeak = yes
- 464.h264ref: basepeak = yes

**C++ benchmarks:**

- 471.omnetpp: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-ra-region-strategy=block -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap`
- 473.astar: `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64`

Continued on next page
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**Peak Optimization Flags (Continued)**

```plaintext
483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap
```

---

**Peak Other Flags**

```plaintext
C benchmarks:
403.gcc: -Dalloca=_alloca
```

---

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:


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For other inquiries, please contact webmaster@spec.org.

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